

## REMARKS

### I. Introduction

Claims 21 to 27 and 44 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

### II. Rejection of Claims 21, 22, 24, 25, and 27 Under 35 U.S.C. § 103(a)

Claims 21, 22, 24, 25, and 27 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,003,305 (“Martin et al.”), U.S. Patent No. 5,932,885 (“DeBellis et al.”), and JP 361149711 (“Kato”). It is respectfully submitted that the combination of Martin et al., DeBellis et al., and Kato does not render unpatentable the present claims for at least the following reasons.

Claim 21, as amended, recites that a method for operating an afterburner device for the afterburner device having a nozzle for metering in at least one of fuel, residual gases, and air, into a combustion chamber that is filled at least in part with foamed ceramics, and having a discharge opening for discharging combustion gases, includes, *inter alia*, recirculating at least a part of the combustion gases to a heat exchange channel that is thermally coupled to at least one of the combustion chamber and the foamed ceramics without the recirculated combustion gases mixing with the fuel, the residual gases, or the air. Support for this amendment may be found, for example, on page 10, lines 31 to 34.

The Final Office Action admits on page 3 that Martin et al. “does not teach recirculating at least a part of the combustion gases to a heat exchange...”, but instead cites DeBellis et al. as allegedly disclosing this feature. Specifically, the Examiner refers to Fig. 4 which shows a thermophotovoltaic electric generator, and which includes, a channel 14 to bring incoming combustion air into the combustion chamber 104, a recuperator section 121, and a wall 142, where combustion gases burned in combustion chamber 104 pass through recuperator section 121 and transfer heat across wall 142 to vaporize incoming liquid fuel stream 12, and a recuperator channel 112. Nowhere, however, do DeBellis et al. mention recirculating combustion gas. DeBellis et al. merely show gas entering a combustion chamber 104 through channel 14 and then exiting combustion chamber

104 through recuperator channel 112. Nowhere, do DeBellis et al. disclose, or even suggest, that the exiting gas is recirculated back to the combustion chamber 104.

Furthermore, the present claim, as amended, recites that the recirculated combustion gases does not mix with the fuel, the residual gases, or the air. According to Kato, the recirculated gases are supplied into passage 12 and is mixed with the air, and then passes through air chamber 4 together with the air and then is injected into fluidized bed 3 through nozzle 4. Martin et al. and DeBellis et al. do not cure this deficiency.

As such, it is respectfully submitted that the combination of Martin et al., DeBellis et al., and Kato does not render unpatentable claim 21, or claims 22, 24, 25, and 27, which depend from claim 21.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

### **III. Rejection of Claim 23 Under 35 U.S.C. § 103(a)**

Claim 23 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Martin et al., DeBellis et al., Kato, and U.S. Patent No. 6,422,745 (“Glasheen et al.”). It is respectfully submitted that the combination of Martin et al., DeBellis et al., Kato, and Glasheen et al. does not render unpatentable claim 23 for at least the following reasons.

Claim 23 depends from claim 21 and therefore includes all of the features included in claim 21. As more fully set forth above, the combination of Martin et al., DeBellis et al., and Kato does not disclose, or even suggest, all of the features included in claim 21. Glasheen et al. is not relied upon for disclosing or suggesting the features of claim 21 not disclosed or suggested by the combination of Martin et al., DeBellis et al., and Kato. Indeed, it is respectfully submitted that Glasheen et al. does not disclose, or even suggest, the features included in claim 21 not disclosed or suggested by Martin et al., DeBellis et al., and Kato. As such, it is respectfully submitted that the combination of Martin et al., DeBellis et al., Kato, and Glasheen et al. does not render unpatentable claim 23, which depends from claim 21.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Rejection of Claim 26 Under 35 U.S.C. § 103(a)**

Claim 26 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Martin et al., DeBellis et al., Kato, and U.S. Patent No. 3,898,317 (“Hemsath et al.”). It is respectfully submitted that the combination of Martin et al., DeBellis et al., Kato, and Hemsath et al. does not render unpatentable claim 26 for at least the following reasons.

Claim 26 depends from claim 21 and therefore includes all of the features included in claim 21. As more fully set forth above, the combination of Martin et al., DeBellis et al., and Kato does not disclose, or even suggest, all of the features included in claim 21. Hemsath et al. is not relied upon for disclosing or suggesting the features of claim 21 not disclosed or suggested by the combination of Martin et al., DeBellis et al., and Kato. Indeed, it is respectfully submitted that Hemsath et al. does not disclose, or even suggest, the features included in claim 21 not disclosed or suggested by Martin et al., DeBellis et al., and Kato. As such, it is respectfully submitted that the combination of Martin et al., DeBellis et al., Kato, and Hemsath et al. does not render unpatentable claim 26, which depends from claim 21.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **V. Rejection of Claim 44 Under 35 U.S.C. § 103(a)**

Claim 44 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Martin et al., DeBellis et al., and Kato. It is respectfully submitted that the combination of Martin et al., DeBellis et al., and Kato does not render unpatentable claim 44 for at least the following reasons.

Claim 44 depends from claim 21 and therefore includes all of the features included in claim 21. As more fully set forth above, the combination of Martin et al., DeBellis et al., and Kato does not disclose, or even suggest, all of the features included in claim 21. As such, it is respectfully submitted that the combination of Martin et al., DeBellis et al., and Kato, does not render unpatentable claim 44, which depends from claim 21.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

**VI. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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